

### ABSTRACT

A processing block is equipped with a storage to facilitate storage and  
5 maintenance of a thread switching structure to provide multi-threading support in  
a light-weight manner. In various embodiments, the structure includes a current  
thread identifier, and a thread array of thread entries describing the threads to be  
executed interleavingly. Further, in various embodiments, the processing block  
includes an execution sub-block and a thread management sub-block equipped  
10 to support at least a create thread, a thread execution termination, and a thread  
execution switching instruction.